

REMARKS

Claims 1,3,4, 6-12 are pending.

The Specification stands objected to for a non-descriptive title.

Claim 3 stands rejected for indefiniteness for a missing ending following "and said".

Claims 1, 3, 7-12 stand rejected for anticipation by Abbott.

Claims 4,6 stand rejected for obviousness v. Abbott in view of Martinez.

Claims 1,3,4, and 6 are herein amended to clarify differences v. Abbott, and Martinez.

Regarding the basis for amendments:

Current amendments to the claims are language clarifications of the previously presented claims, and do not introduce new matter.

In response to the Office Action:

Regarding Item 4 the objection to the title:

The title is herein amended to be more clearly indicative of the invention.

Regarding Item 5,6 the rejection of claim 3 for indefiniteness:

Claim 3 is herein amended to provide the missing phrase at the end of the claim. Applicant believes that claim 3 is now in order. Reconsideration of the indefiniteness rejection of claim 3 is respectfully requested.

Regarding Item 7,8 the rejection of claims 1,3, 7-12 for anticipation by Abbott:

Regarding the rejection of independent claim 1:

An anticipation rejection requires that the reference have *all* of the elements and limitations of the instant invention. Applicant respectfully submits that Abbott does not have *all* the elements and limitations of the instant invention. For example, claim 1 of the instant invention has

- a) an *axial flow turbine* wheel; upon which
- b) driving air exerts force in the *axial* direction; and
- c) a driving air flow directed axially from the front toward the rear (i.e. *away* from the drill head).

Abbott has none of these elements and limitations:

a) Abbott has a "*rotary vane motor*" (see col. 2, line 58, for example), commonly recognized as a "Wankel engine" configuration, having a *tangential* drive force with any axial flow being extraneous to the air drive classification, i.e. Abbott does not have an *axial flow* turbine wheel;

b) Abbott has a drive airflow applying force *tangentially* against the vanes (col. 3, lines 14-15), i.e. the driving air does not exert force in the axial direction; and

c) Abbott has the air outlet 209 (FIG. 2) in front of the air inlet 201, so to the extent that any axial airflow is present, it flows *toward* the drill head not away.

Applicant submits that Abbott does *not* have all the elements and limitations of the instant application, and therefore does *not* meet the threshold requirements for an anticipation rejection.

Reconsideration of the anticipation rejection of claim 1 is respectfully requested.

Regarding the rejection of dependent claims 3, 7-12 for anticipation by Abbott:

Since the dependent claims, by definition, include all of the elements and limitations of the base claim, the dependent claims cannot be anticipated by a reference that does not anticipate the amended base claim 1. Since Abbott has been shown above to not anticipate the base claim, Abbott cannot anticipate the dependent claims.

Reconsideration of the anticipation rejection of dependent claims is respectfully requested.

Regarding Items 9,10 the rejection of dependent claims 4,6 for obviousness v. Abbott and Martinez:

Obviousness requires that the combination of the cited references have *all* the elements and limitations of the instant application. Applicant submits that the combination of Abbott and Martinez does not have all of the elements and limitations of the instant application. Specifically, Examiner credits Abbott as having all the elements of claims 4,6, except the air deflector, and Martinez is cited for contributing the air deflector. However, as shown above, claim 1 of the instant invention has a driving air flow directed axially from the sealed front toward the rear (i.e. *away* from the drill head seals). This feature is not present in either Abbott, or Martinez; therefore the combination of Abbott and Martinez does not have this feature.

Further, although Martinez has air deflectors, they do not have the correct limitations; being axial flow stators as opposed to the radial-to-axial deflectors of the instant claims. Therefore the combination of Abbott and Martinez does not have the radial-to-axial deflectors of the instant claims.

In addition, obviousness requires a "clear and particular" suggestion to combine in a manner to produce the instant invention with an expectation of success. Applicant finds no such suggestion in the combination of Abbott and Martinez. In fact, Abbott and Martinez do not appear

to be easily combined in the manner of the instant invention, as Abbott has a tangential force air flow design, as discussed above, and Martinez has only axial air flow stators. Further, Martinez teaches centerline compressed air injection with environmental air aspiration from the front of the turbine wheel, which completely contravenes the front air seal of the instant application. Applicant finds no suggestion in either Abbott or Martinez to combine the tangential and the axial flow features in a manner that would produce the instant invention.

Applicant submits that the combination of Abbott and Martinez does not meet the threshold requirements for an obviousness rejection. Reconsideration of the obviousness rejection of is respectfully requested.

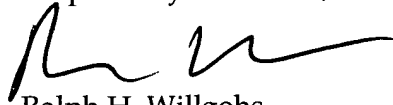
Applicant believes that this amendment answers all instances in which the Examiner rejected or objected, and that the amendment places all remaining claims in condition for allowance.

CONCLUSION

In view of the foregoing, Applicant believes all claims now pending in this application are in condition for issue. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (408) 358-0489.

Respectfully submitted,



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